

EXTRA SET OF THE CLAIMS, WITH REFERENCE SIGNS:

1. A method of wedge-bonding wires (21, 21') in the manufacture of electronic devices (20, 20'), wherein:

- 5 • a reversible bonding tool (10) is used having a wedge-bonding tip (1, 2) at opposite ends of the tool,
- and, after using the wedge-bonding tip (1) at one end (11) for bonding wires (21), the tool (10) is reversed to use the wedge-bonding tip (2) at the opposite end (12) for bonding further wires (21').

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2. A method according to Claim 1, wherein the bonding tool (10) comprises a shank of tungsten carbide having the wedge-bonding tips (1, 2) at opposite ends of the shank.

- 15 3. A method according to Claim 1 or Claim 2, wherein the wires (21, 21') comprise aluminium or gold and are ultra-sonically bonded using a transducer coupled to the tool.

4. A wire-bonding machine for ultrasonic wedge-bonding of wires in the manufacture of electronic devices (20, 20'), wherein the machine includes a reversible bonding tool (10) having a wedge-bonding tip (1, 2) at opposite ends (11, 12) of the tool, and a mount (31) for coupling the tool to an ultrasonic transducer (30), the mount allowing the tool to be reversed so as to permit wire bonding using either the wedge-bonding tip (1) at one end (11) or the wedge-bonding tip (2) at the opposite end (12).

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5. A wire-bonding machine according to Claim 4, wherein the bonding tool (10) comprises a shank having the wedge-bonding tips (1, 2) at opposite ends (11, 12) of the shank, and wherein the mount (31) engages the tool (10) at a position on the shank between its opposite ends (11, 12).

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6. A reversible bonding tool for use in a method according to any one of Claims 1 to 3 or in a machine according to Claim 4 or Claim 5, wherein the tool comprises a shank having a wedge-bonding tip (1, 2) at opposite ends of the shank.

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7. A reversible bonding tool for use in a method according to any one of Claims 1 to 3 or in a machine according to Claim 4 or Claim 5, wherein the tool comprises a shank having at its opposite ends (11, 12) a material which is different to that of the shank and which provides a wedge-bonding tip (1, 2) at each of the opposite ends of the shank.

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8. A machine according to Claim 4 or Claim 5 or a tool according to Claim 6 or Claim 7, wherein the wedge-bonding tips (1, 2) at opposite ends are of tungsten carbide.

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9. An electronic device, for example an integrated circuit or a power semiconductor device, that includes connections in the form of wires (21, 21') which are wedge-bonded using a method or machine or tool according to any one of the preceding Claims.

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